At Dunwoody College of Technology, the Computer Networking Systems program prepares graduates for careers in the rapidly growing and changing field of IT. Students are taught current technologies and skills to architect, support, build, and maintain enterprise networks and systems. Those technologies include virtualization, IT security, directory services, network and systems automation, as well as routing and switching.

Coursework includes Microsoft and Linux operating systems, related network support services featuring Cisco® Academy curriculum, and desktop and server hardware. Skills in coding, computer logic, and data communications are developed as well. Interpersonal soft-skills are emphasized in all courses.

Arts & Sciences courses enhance and support the technical coursework.

Credential Earned: AAS
Length of Program: 2 years (4 semesters)
Classes Offered: Day
Available Starts: Fall Semester; Spring Semester

Program Outcomes

- Create an enterprise network system.
- Configure enterprise hardware.
- Build a virtualized enterprise environment.
- Use programming fundamentals for automating networks and services.
- Deploy relevant industry applications in an enterprise environment.
- Apply troubleshooting techniques to discover and resolve problems.

Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>General Requirements</strong></td>
<td></td>
</tr>
<tr>
<td>COMM1150</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>HUMN2400</td>
<td>Ethics</td>
<td>2</td>
</tr>
<tr>
<td>MATH1050</td>
<td>Algebra, Trigonometry &amp; Geometry</td>
<td>3</td>
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<tr>
<td>MATH1250</td>
<td>Boolean Algebra</td>
<td>3</td>
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<tr>
<td>PSYC1000</td>
<td>Psychology</td>
<td>3</td>
</tr>
<tr>
<td>WRIT2010</td>
<td>Technical Writing</td>
<td>3</td>
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<tr>
<td></td>
<td><strong>Humanities</strong></td>
<td>3</td>
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<tr>
<td></td>
<td><strong>Technical Requirements</strong></td>
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<tr>
<td>CNTS1101</td>
<td>Introduction to Operating Systems</td>
<td>4</td>
</tr>
<tr>
<td>CNTS1122</td>
<td>Introduction to Networking</td>
<td>3</td>
</tr>
<tr>
<td>CWEB1003</td>
<td>Programming Fundamentals I</td>
<td>3</td>
</tr>
<tr>
<td>CWEB1010</td>
<td>Introduction to Web Development</td>
<td>3</td>
</tr>
<tr>
<td>CNTS1201</td>
<td>Scripting</td>
<td>4</td>
</tr>
<tr>
<td>CNTS1211</td>
<td>Server Systems</td>
<td>5</td>
</tr>
<tr>
<td>CNTS1231</td>
<td>Network Systems</td>
<td>4</td>
</tr>
<tr>
<td>CNTS2101</td>
<td>Routing &amp; Switching</td>
<td>5</td>
</tr>
<tr>
<td>CNTS2112</td>
<td>Advanced Server Systems</td>
<td>5</td>
</tr>
<tr>
<td>CNTS2131</td>
<td>Virtualization</td>
<td>3</td>
</tr>
<tr>
<td>CNTS2201</td>
<td>Advanced Routing &amp; Switching</td>
<td>5</td>
</tr>
<tr>
<td>CNTS2212</td>
<td>Enterprise Systems</td>
<td>5</td>
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<td>CNTS2224</td>
<td>Enterprise Linux Administration</td>
<td>3</td>
</tr>
</tbody>
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Total Credits: 72

Courses

Descriptions

- **CNTS1101 | Introduction to Operating Systems | Lec/Lab (4 Credits)**
  Examine maintenance and repair concepts of computer operating systems, hardware, peripherals, and component selection/installation for machines commonly found in a business. Practice using the file systems and command line interfaces of Linux and Windows operating systems to gain a basic understanding of how they work and their similarities and differences.
  Corequisite(s): CNTS1122

- **CNTS1122 | Introduction to Networking | Lec/Lab (3 Credits)**
  Introduction to the concepts and terminology of data communications in a business environment. Examine client-server networking, communication hardware, software, and basic security. Analyze services and models supporting data communications interoperability. Configure and troubleshoot basic network connections and the associated hardware/software.
  Corequisite(s): CNTS1101

- **CWEB1003 | Programming Fundamentals I | Lec/Studio (3 Credits)**
  Examine basic programming principles like data types, variables, expressions, operators, Boolean logic, algorithm creation, flowcharts. Topics include: structured programming and programming logic constructs (sequence, selection, and loops); abstraction, modularization, dynamic and static data-structures, object-oriented and event driven programming.
  Corequisite(s): CWEB1010

- **CWEB1010 | Introduction to Web Development | Lec/Studio (3 Credits)**
  Hypertext Markup Language (HTML). Basic page structure, tags, link, text formatting, forms, tables, and debugging with trouble-shooting skills. Cascading Style Sheets (CSS), advanced formatting, and layout. Integration of web scripting languages (like Javascript) into existing web pages to increase user-friendliness and functionality. Creation of scripts for new pages.
  Corequisite(s): CWEB1003

- **CNTS1201 | Scripting | Lec/Lab (4 Credits)**
  Apply programming techniques to managing computer systems and networks. Topics include: programming and its best practices, methods of code writing, and development of real world scripts used to manage enterprise networks.
  Prerequisite(s): CWEB1003
  Corequisite(s): CNTS1211

- **CNTS1211 | Server Systems | Lec/Lab (5 Credits)**
  Install, configure, maintain, and manage the primary services in the Server operating system. Introduction to the sharing of system resources, remote administration techniques to facilitate efficient and effective management of business computer systems.
  Prerequisite(s): CNTS1101 And CNTS1122
  Corequisite(s): CNTS1201
CNTS1231 | Network Systems | Lec/Lab (4 Credits)
Expansion of concepts and terminology of business data communications and how they apply to the business environment. Intermediate to advanced client-server networking concepts, including its associated networking hardware, addressing and services; logical addressing, IP routing, and network protocols. Install and configure client-server networking systems.
Prerequisite(s): CNTS1122

CNTS2101 | Routing & Switching | Lec/Lab (5 Credits)
Examine concepts and application of bridging, switching, and routing in an industry-standard networking environment. Install, configure, and manage networks, routers, and switches to facilitate basic network communication architectures. Portions of this course help to prepare for the Cisco Certified Networking Associate (CCNA) exam.
Prerequisite(s): CNTS1231

CNTS2112 | Advanced Server Systems | Lec/Lab (5 Credits)
Install, configure, maintain, and manage enterprise servers and services. Configure and deploy cloud-based servers and services. Configure and deploy virtual server environments. Configure and deploy highly available server and service solutions. Utilize automation in the management of Directory services.
Prerequisite(s): CNTS1211

CNTS2131 | Virtualization | Lec/Lab (3 Credits)
Install, configure, maintain, and manage a variety of virtualization software; examine the underlying principles of virtualization; create a virtual IT infrastructure; advantages and disadvantages of moving to a virtualized environment; comparison of major virtualization software systems.
Prerequisite(s): CNTS1211

CNTS2201 | Advanced Routing & Switching | Lec/Lab (5 Credits)
Advanced concepts and application of bridging, switching, and routing in an industry-standard networking environment. Practice advanced business network communication architectures. This course helps to prepare for the Cisco Certified Networking Associate (CCNA) exam.
Prerequisite(s): CNTS2101

CNTS2212 | Enterprise Systems | Lec/Lab (5 Credits)
Install, configure, maintain, and manage Enterprise email services and the considerations needed to optimize deployment. Manage and maintain Enterprise databases. Develop and deploy Enterprise Content management services including, site security, database connectivity; site administration and monitoring for use in a business setting. Develop skills in Cloud service Architecture as part of the AWS Academy curriculum.
Prerequisite(s): CNTS2112

CNTS2224 | Enterprise Linux Administration | Lec/Lab (3 Credits)
Install, configure, maintain, and manage a wide variety of Open Source Software (OSS) with an emphasis on common web, file and database servers found in industry; the history of the open source movement. Configure OSS operating systems to support common client-servers, Web hosting, and other services commonly found at the enterprise and ISP levels of industry. In-depth coverage of technologies related to hosting websites including programming language support, database support/connectivity, and remote access.
Prerequisite(s): CNTS2130

COMM1150 | Interpersonal Communication | Lecture (3 Credits)
Analyze the process of interpersonal communication as a dynamic and complex system of interactions. Integrate interpersonal communication theory into work, family and social relationships. Apply fundamental tools needed to provide quality customer service. Decision making, problem solving, and managing customer service processes are emphasized.
General Education: Communications

HUMN2400 | Ethics | Lecture (2 Credits)
The development of ethical standards as related to the individual, government, business, and society. Current legislation is examined from the perspective of its moral and ethical roots with considerations and standards influencing personal and business decisions.
General Education: Humanities

MATH1250 | Boolean Algebra | Lecture (3 Credits)
Binary, octal and hexadecimal number systems. Boolean algebra and mapping.
General Education: Mathematics

MATH1050 | Algebra, Trigonometry & Geometry | Lecture (3 Credits)
Principles of algebra, geometry and trigonometry used in the context of a technical setting. Problem-solving strategies are developed and applied to technology.
Corequisite(s): CMGT2203
General Education: Mathematics

PSYC1000 | Psychology | Lecture (3 Credits)
The science of human behavior; the history of the discipline, biological foundations, personality, measurement, learning, stress and mental disorders.
General Education: Social Sciences

WRIT2010 | Technical Writing | Lecture (3 Credits)
Technical writing applications are studied for format, style, voice, and point of view; considered for purpose, audience, and subject. Critical thinking and developed expertise are employed to analyze, interpret, evaluate, summarize and generate various technical documents, individually and within teams.
General Education: Communications